GEH-01-064
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: John M. Belcea :
: Art Unit: 3613
Serial No.: 09/752,276 :
: Examiner:
Filed: December 29, 2000 :
:
For: Adaptive Train Model :

CERTIFICATE OF MAILING

I certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on ____________________, 2001.

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Robert B. Reeser III
Reg. No. 45,548

PRELIMINARY AMENDMENT

Hon. Assistant Commissioner for Patents
Washington, D.C. 20231

Please enter the following amendment prior to publication and examination of this application.

IN THE SPECIFICATION

Please delete the paragraph starting on page 7, line 28, and ending on page 8, line 9, and beginning with the words, "Values l_{ij}" and substitute therefor the following paragraph.

Values l_{ij} are the "footage" determined by a track database using two successive elevation records. The first and the last sections of the consist should be determined according to the position of the head and the tail of the train with respect with the surrounding terrain. As the train

travels, the size of the train sections are changing continuously, thus they are time dependent. Constraint

$$L_i = \sum_{j=1}^{n} l_{ij}(t) \qquad (5)$$

is verified at each moment t. The value of $\cos(\pi / 2 - \alpha_{ij})$ is approximately the same as the value of the field "slope" in a track database divided by 100.

$E_i(t)$ is determined by

$$E_i(t) = \sum_{j=1}^{n} l_{ij}(t)\, slope_{ij} / 100 \;\; DB\_DIRECTION. \qquad (6)$$

Please delete the paragraph on page 24, beginning at line 15, ending at line 18, and beginning with the words, "The confidence column", and substitute therefor the following paragraph.

The confidence column is determined by the modified ERF function,

$$1 - \frac{1}{\sqrt{2\pi}} \int_{\frac{-\varepsilon}{\sigma}}^{\frac{+\varepsilon}{\sigma}} e^{-\frac{t^2}{2}}\, dt$$

Remarks

The requested amendment to the Specification, as shown above, is for publication purposes and not for patentablilty purposes. Extraneous text that is not necessary for an understanding of the invention has been deleted from the amended paragraphs. Furthermore, no new text or new matter has been added. Submitted herewith is a marked up version of the paragraphs amended in accordance with the requested amendment to the Specification, shown above.

Applicant requests entry of the forgoing amendment prior to publication and examination of this application. Favorable action is respectfully solicited.

Respectfully Submitted,

Robert B. Reeser III
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SUBMISSION OF MARKED UP PARAGRAPHS

Hon. Assistant Commissioner for Patents
Washington, D.C. 20231

Submitted herewith are marked up paragraphs in accordance with 37 C.F.R. 1.121(b).

IN THE SPECIFICATION

Please amend the paragraph starting on page 7, line 28, and ending on page 8, line 9, and beginning with the words, "Values l_{ij}" as follows:

Values l_{ij} are the "footage" determined by a track database using two successive elevation records. The first and the last sections of the consist should be determined according to the position of the head and the tail of the train with respect with the surrounding terrain. As the train travels, the size of the train sections are changing continuously, thus they are time dependent. Constraint

$$L_i = \sum_{j=1}^{n} l_{ij}(t) \qquad (5)$$

is verified at each moment t. The value of $\cos(\pi / 2 - \alpha_{ij})$ is approximately the same as the value of the field "slope" in a track database divided by 100 [**(PLEASE DEFINE FIELD SLOPE)**].

$E_i(t)$ is determined by

$$E_i(t) = \sum_{j=1}^{n} l_{ij}(t)\, \text{slope}_{ij} / 100 \;\; \text{DB\_DIRECTION.} \qquad (6)$$

Please amend the paragraph on page 24, beginning at line 15, ending at line 18, and beginning with the words, "The confidence column", as follows:

The confidence column is determined by the modified ERF [(**PLEASE DEFINE ERF)**] function,

$$1 - \frac{1}{\sqrt{2\pi}} \int_{\frac{-\varepsilon}{\sigma}}^{\frac{+\varepsilon}{\sigma}} e^{-\frac{t^2}{2}} \, dt$$

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Respectfully Submitted,

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